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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/645,261	08/20/2003	Weixun Cao	Weixun-080	7334
26797 7590 10/16/2007 SILICON VALLEY PATENT AGENCY 7394 WILDFLOWER WAY CUPERTINO, CA 95014			EXAMINER CORRIELUS, JEAN B	
			ART UNIT 2611	PAPER NUMBER
			MAIL DATE 10/16/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/645,261

Applicant(s)

CAO, WEIXUN

Examiner

Jean B. Corrielus

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 and 29 is/are rejected.
- 7) ☒ Claim(s) 23-28 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. The later-filed application must be an application for a patent for an invention which is also disclosed in the prior application (the parent or original nonprovisional application or provisional application). The disclosure of the invention in the parent application and in the later-filed application must be sufficient to comply with the requirements of the first paragraph of 35 U.S.C. 112. See *Transco Products, Inc. v. Performance Contracting, Inc.*, 38 F.3d 551, 32 USPQ2d 1077 (Fed. Cir. 1994).

The disclosure of the prior-filed application, Application No. 60/404,950, fails to provide adequate support or enablement in the manner provided by the first paragraph of 35 U.S.C. 112 for one or more claims of this application. The following limitations of "one output from the predistortion calibration unit used to adjust the phase signal" as recited in claim 23, is not supported by the disclosure of the prior filed application. For instance fig. 5 of the drawing and the corresponding text do not teach any signal output from the "predistortion calibrator" to control the "phase gain unit" For the limitations "demodulating samples of an output of the power amplifier and the modulated voltage controlled oscillator to regenerate a first signal, a second signal **and a third signal in a digital format**; comparing the demodulated first and second signals to the baseband amplitude signal and phase signals with reference **to the third signal**, respectively" as recited in claim 24 is not supported by the and is not supported by the disclosure of the prior filed application. The drawing fig. 5 only show a first and second signal being generated from the demodulator as opposed to a first second and third signals as

presently recited in the claim. Accordingly, claims 23-29 are not entitled the benefit of the prior filed application.

Response to amendment

2. Applicant's response has overcome the objection and rejection set forth in the last office action. However, after further consideration, the claims are rejected and/or objected to as set forth below.

Claim Objections

3. Claims 23-29 are objected to because of the following informalities: claim 23, line 10 the limitation "before being demodulated" suggests that there is a previous limitation to "demodulating the sample" while in fact there is no such previous limitation recited in the claim. It is suggested to replace "before being" by "and".

Claim 27, line 3, "modulated should be inserted after "the" so as to be consistent with antecedent. Claim 27, line 5 recites "comparing two phase modulated signal in a phase detector and line 12 further recites "coupling a reference signal to another input of the phase detector" suggesting that the phase detector is configured to receive "two phase modulated signals and a reference signal while in fact the phase detector is configured to receive and compare only two signals. See fig. 5 element 515 and related text in addition, a limitation such as "from an output of the feedback frequency divider", should be inserted after "signal" in line 12. In addition how does the "adder" recited in claim 27 relate to the previous limitation recited in the claim. (i.e. how are the interconnected?)

As per claim 28, how does the "phase detector" recited in claim 27 relate to the previous limitation recited in the claim. (i.e. how are they interconnected?)

As per claim 29, last two lines, the limitation "using adaptive digital predistortion to generate the adaptive phase gain and phase offset signals" is not consistent with the specification and drawing that teaches the device 511 and 523 generates "phase gain" and "phase offset signals", respectively.

Note that any claim whose base claim is objected is likewise objected.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-22 and 29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is vague and indefinite because the claim recites a series of elements without the necessary connection between the elements. For instance, there is no interconnection between the VCO and previous limitation recited in the claim. It is unclear whether "the phase equalizer" is coupled to the "signal decomposition" or the "adaptive predistorter" to equalize the time delay between the first and the second signals. Similar comment applies to the recitation "power amplifier". In addition, a limitation such as "coupled to the signal decomposition unit" should be inserted after "predistorter" to indicate that it is so coupled.

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Claim 3 recites a series of elements without the necessary connection between the elements. The claim is therefore vague and indefinite.

The limitation "a phase gain unit", recited in claim 11, line 2, is vague and indefinite as there is an unclear antecedent in claim 8, line 3.

As per claim 12, see claim 1.

As per claim 14, see claim 3.

Claim 22 the limitation PLL is recited independent of the limitation VCO recited in claim 12 while in fact the VCO is part of the PLL.

As per claim 29, the limitation "the phase modulated baseband signal" lacks of proper antecedent basis.

Note that any claim whose base claim is rejected is likewise rejected.

Allowable Subject Matter

6. Claims 23-28 would be allowable if amended to overcome the objection set forth above.


7. Claim 1-22, and 29 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean B. Corrielus whose telephone number is 571-272-3020.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on 571-272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Jean B Corrielus
Primary Examiner
Art Unit 2611